Figure 10 illustrates the selection of blocks for pixel interpolation or modification.

Figure 11 illustrates one embodiment of a block oriented compression process.

Figure 12 illustrates a zig-zag processing order for entropy encoding coefficients.

Figure 13 illustrates a method of modifying the spectral content of a selected block of pixels subject to a plurality of constraints.

Figure 14 illustrates a wavelet transform based image compression process.

Figure 15-16 illustrate a coder matched layer separation process for wavelet transform based image compression.

Figure 17 illustrates a method of interpolating irrelevant pixels for wavelet transform based image compression.

Figure 18 illustrates interpolation of irrelevant pixels at the center of a smoothing filter progressing across the image in a raster scan order.

DETAILED DESCRIPTION

In one embodiment MRC represents a compound document 110 using three layers (background 130, foreground 120, and mask 140) as illustrated in Figure 1. The background and foreground are image layers and the mask layer is binary (i.e., 1 bit per pixel). Once represented as layers, the document may be compressed. The background and foreground layers may be encoded at a lower resolution than the original, but the mask is always coded in a lossless manner at full resolution. The three layer model may be extended to N layers by adding layers in (image, mask) pairs.

To reconstruct the original document, the background and foreground layers are reconstructed from their corresponding compressed layer data. The mask identifies whether a pixel of the reconstructed